

What is claimed is:

1. An apparatus comprising:

a computer controlled by an operating system program and a plurality of driver programs for peripheral devices and one or more application programs, said operating system including a telephone function library of programs that control the computer to implement conventional telephone functions such as dialing DTMF tones, flash signals etc., said operating system controlling said computer to implement a telephony application programmatic interface, hereafter referred to as TAPI, comprised of a plurality of function calls each of which may be invoked to implement a known telephony function by invoking into execution one or more of said programs in said telephone function library;

a TAPI compliant telephony peripheral device capable of digital communication with said computer and coupled to said computer by a data path and structured for connection to a telephone line from a telephone service provider, said TAPI compliant telephony device structured to be capable of carrying out telephone function commands issued by one or more programs in execution from said telephone function library so as to control the computer to implement a conventional telephone function for each function call in said TAPI;

a keyboard peripheral coupled to said computer for providing user inputs;
a pointing device peripheral coupled to said computer for providing user inputs;

a video display peripheral coupled to said computer;

and wherein said operating system contains or is coupled to a TAPI compliant dialer program which is coupled to said TAPI compliant telephony device through said computer and which is capable of controlling said TAPI compliant telephony device to provide selected forms of call control functionality such as dial, transfer unsupervised, transfer supervised, conference, hold or pop which may be invoked through context sensitive menus displayed on said video display peripheral.

1 2. The apparatus of claim 1 wherein said dialer program controls said computer to
2 display a dialer icon on said video display so as to always be visible regardless of which
3 program is currently controlling execution of said computer.

1 3. The apparatus of claim 2 wherein said dialer program controls said computer so
2 as control said video display to display said dialer icon in or near the title bar of the
3 currently active window in which the displays created by the currently active application
4 program are displayed.

1 4. The apparatus of claim 2 wherein said dialer program controls said computer so
2 as control said video display to display said dialer icon in or near the system tray of a
3 Windows 95 operating system driven desktop video display.

1 5. The apparatus of claim 1 wherein said dialer program controls said computer to
2 control said video display to display one or more drop down menus when a pointing device
3 click on said dialer icon is detected, the menu options displayed on said drop down menus
4 being dependent upon whether the user is or is not currently engaged in a telephone
5 conversation via said TAPI telephony device.

1 6. The apparatus of claim 1 wherein said dialer program controls said computer to
2 control said video display to display one or more drop down menus when a hot key
3 combination event is detected comprising pressing a predetermined combination of several
4 keys on said keyboard peripheral simultaneously, the menu options displayed on said drop
5 down menus being dependent upon whether the user is or is not currently engaged in a
6 telephone conversation via said TAPI telephony device.

1 7. The apparatus of claim 4 wherein said dialer controls said computer to store
2 names and telephone numbers in a phone book file stored in memory or on a hard disk of said
3 computer and to control said video display to display menu options which depend upon one or
4 more of the following factors:

5 whether the user has any text or numbers selected in a window of the current
6 application program;

7 whether the selected text or numbers appear to contain a phone number or
8 not;
9 if not a phone number, whether the selected text matches any stored name in
10 an phone book file stored in memory or on a hard disk peripheral of said computer;
11 whether or not the user of said computer is or is not currently using said
12 TAPI telephony device in an ongoing telephone conversation; and
13 regardless of whether the user is or is not currently engaged in a telephone
14 conversation, whether or not a telephone number has been highlighted in a window of
15 the current application program.

1 8. The apparatus of claim 7 wherein said dialer program further controls said
2 computer to control said video display to display menu options which depend upon one or
3 more of the following factors:

4 if the selected text does not contain a phone number and does not match a name
5 in said phone book file, whether the selected text appears to be a URL.

1 9. The apparatus of claim 8 wherein one of the application programs controlling said
2 computer is a web browser program and wherein said dialer program controls said
3 computer to launch said web browser if the user has selected text in the active window of the
4 active application program which is a URL and to cause said web browser to open the web
5 page located on the world wide web at the URL which is highlighted.

1 10. The apparatus of claim 1 wherein said dialer program controls said computer to
2 control said video display so as to display all available telephony function options in a menu
3 when a hot key combination is pressed or a pointing device click on a dialer icon is detected
4 with the available options for the particular context displayed in contrasting color to options
5 which are not available.

1 11. The apparatus of claim 1 wherein said dialer program controls said computer
2 to control said video display so as to display all available telephony function options in a
3 menu when a hot key combination is pressed or a pointing device click on a dialer icon is

4 detected with the available options for the particular context displayed in contrasting color
5 to options which are not available.

sub cont } 12. The apparatus of claim 1 wherein said dialer program controls said computer to
2 control said video display so as to display all available telephony function options in a menu
3 when a hot key combination is pressed or a pointing device click on a dialer icon is detected
4 with the available options for the particular context signalled to the user in any way.

1 13. A process for controlling a computer coupled to a telephony device to implement
2 telephony functions, said computer having an operating system with a library of computer
3 programs that, when executed control said computer to implement a telephony function,
4 comprising:

5 determining when a predetermined event has occurred indicating a user of
6 said computer wishes to implement a telephony function, said predetermined event
7 being any event caused by any predetermined user manipulation of user input devices
8 coupled to said computer indicating a desire to see a menu of available telephony
9 functions;

10 displaying a context sensitive menu of available telephony functions when
11 said predetermined event is detected; and

12 determining which if any menu option is selected, and invoking into execution
13 the particular computer program in said library of computer programs so as to
14 control said computer to implement the selected telephony function.

sub } 14. A process for controlling a computer coupled to a telephony device to implement
2 telephony functions, comprising determining the active program which is currently
3 controlling a computer and adding telephony functions to said active program some or all of
4 which it may not have previously had and wherein said telephony functions can be carried
5 out by a user by invoking selections from a telephony menu.

1 15. An apparatus comprising:
2 a telephony device;

3 a computer having a video display and coupled by said telephony device
4 controlled by a driver program for said telephony device, an operating system having
5 a library of programs that can implement telephony functions by communicating
6 with said telephony device via said driver program and a plurality of application
7 programs, one of which is capable of providing a display of a virtual telephone, and a
8 minidialer program which controls said computer to determine which application
9 program is the current active program and add telephony functions to that active
10 program which can be invoked by a user through selections from a context sensitive
11 menu display.

1 16. The apparatus of claim 15 wherein said minidialer program further comprises
2 means for controlling processing of said computer in different ways depending upon whether
3 or not the user has highlighted any text or numbers in the window of said currently active
4 program and whether or not the highlighted text or numbers is a phone number or a name
5 and whether or not the phone number or name is stored in a phone book or other file
6 maintained on said computer, and depending upon whether the user is or is not on the phone
7 when an event occurs indicating a user of said computer wishes to invoke a telephony
8 function.

17. A process for controlling a computer coupled to a telephony device to implement
telephony functions, comprising determining the active program which is currently
3 controlling a computer and adding dial, conference, transfer and hold telephony functions to
4 said active program all of which said active program may not have previously had and
5 wherein said dial, conference, transfer and hold telephony functions can be carried out by a
6 user by invoking selections from a telephony menu.

1 18. A process for controlling a computer coupled to a telephony device to implement
2 telephony functions, comprising determining the active program which is currently
3 controlling a computer and adding one or more telephony functions to said active program
4 including the ability to determine if a highlighted section of text in the active window painted
5 by said active program is a phone number or a name and if, the highlighted text is a name,
6 looking up the phone number for the name in a file maintained on said computer and

